16:49:26 Q. I think you've come to the game a little
16:49:28 later.
16:49:30 Is there a formula by which you can
16:49:35 determine the capacitance that would exist in this
16:49:41 parallel plate capacitor represented in the Court's
16:49:44 Claim Construction Order?
16:49:46 A. There is a simple formula which will
16:49:53 approximate the capacitance here, yes.
16:49:55 Q. Would you please write it down next to
16:49:58 that picture?
16:50:06 A. I would not be sure of what I wrote down
16:50:10 for such a simple figure there.
16:50:13 At this point it, would be a guess.
16:50:16 Q. You've just testified there is a formula
16:50:21 that approximates?
16:50:22 A. Yes.
16:50:22 Q. So as a formula that approximates, would
16:50:26 you please write it down so the Court would be aware
16:50:28 of it?
16:50:28 A. And I've said I would like to check my
16:50:31 notes for the appropriate formula for this
16:50:35 circumstance.
16:50:36 Q. And where are your notes?
16:50:39 What notes are you referring to?
16:50:41 A. I have some basic capacitance notes back

at my house in some capacitor handbooks.

Q. So sitting here today, you cannot tell the Court as a purported expert in this field what even a simple formula for approximating capacitance would be for a parallel plate capacitor represented in the Court's claim construction order on Page 2.

Is that right?

A. I have a simple formula to offer, yes.

Q. Would you please offer that formula in writing for the Court?

A. May I borrow your pen?

Q. Absolutely.

A. May I write it down here?

Q. Yes, please.

A. Let's put voltage and spacing --

Okay.

Q. And would you explain he formula to the Court, what each element means?

A. The capacitance under DC application, i.e., where we have a direct current voltage, is in effect given with the correct units -- and I need to check the units so they're consistent -- is the distance between the plates divided by the applied voltage.

And this assumes now we have plates

16:52:21 which are -- which extend out to infinity. So there's
16:52:27 no edge effects.
16:52:29 It gets considerably more complicated
16:52:32 once the practical formula considering edge effects is
16:52:36 used.
16:52:36 Q. And what would be that formula for the
16:52:40 edge effects?
16:52:41 A. I would have to look it up. I've never
16:52:44 gone through that hypothetical calculation of two
16:52:50 plates.
16:52:50 Q. Have you seen it formulated in
16:52:52 Dr. Dougherty's statement?
16:52:57 A. I may have.
16:52:58 I would have the read his testimony to
16:53:01 be able to answer that with any certainty.
16:53:03 Q. Did you state in your declaration
16:53:08 whether you've seen a formula in Dr. Dougherty's
16:53:11 declaration for calculating capacitance of the fringe
16:53:16 effect capacitance?
16:53:17 A. We're talking about edge -- edge
16:53:20 effects --
16:53:20 Q. Edge --
16:53:20 A. -- not fringe effect.
16:53:23 Q. Edge --
16:53:23 Is there a difference between edge

16:53:25 effects and fringe effects --
16:53:25 A. Yes.
16:53:26 Q. -- as you understand it?
16:53:28 A. Yes.
16:53:28 Q. What is the fringe effect?
16:53:29 A. The fringe effect are where we have
16:53:33 single conductive plates which are edge-to-edge.
16:53:41 Q. Correct.
16:53:42 If you look at Figure --
16:53:46 A. As in the figure directly below that on
16:53:48 the same Page 2 of Exhibit 6, the figure in the middle
16:53:56 of the page.
16:53:56 Q. And if you look at Exhibit 3, which is
16:53:58 the 356 patent, Figure 2A, that's the same fringe
16:54:07 effect capacitance that we've discussed before --
16:54:08 A. That may exist there, yes.
16:54:10 Q. Between ends of contacts 12 and 13.
16:54:10 Right?
16:54:18 A. Right.
16:54:18 Q. Okay.
16:54:19 A. Theoretically, we form a fringe effect
16:54:22 capacitance between those two ends.
16:54:25 Q. Right.
16:54:25 Because they're in an edge-to-edge
16:54:29 relationship?

A. Right.

Q. And now, why did you limit your formula for capacitance for the parallel plate capacitor to the DC voltage?

A. Under AC voltages, as we've said, the frequency measured may well be a function -- sorry.

The capacitance measured under AC conditions can well be a function of the frequency of measurement.

Q. Could you write down that formula that would approximate that parallel plate capacitance?

A. Only in a generic sense.

Q. Please do, to the best of your expert ability sitting here today, so the Court is informed of that.

Could you explain that formula to the Court, please?

A. This is a formula stating that the capacitance under AC conditions is a function -- that's the meaning of the little F -- of the frequency of measurement.

MR. SLONIM: Okay. I'd like to mark as Exhibit 7 a formula that I would like to offer you and ask your expert opinion about.

16:56:28 (Whereupon Exhibit 7 was marked for
16:56:28 identification)
16:56:28 BY MR. SLONIM:
16:56:32 Q. I'm placing before you a -- my
16:56:36 handwritten formula which says "C", for capacitance,
16:56:43 "equals K times A over D."
16:56:46 And I believe --
16:56:48 Have you ever seen this formula before?
16:56:51 A. I have.
16:56:51 Q. And what do you believe this formula to
16:56:56 represent?
16:56:57 A. This represents the capacitance whereby
16:57:05 we have two opposing plates of a specific known area
16:57:12 with some sort of dielectric constant between them,
16:57:18 and of a specific distance between the plates.
16:57:22 Q. Would this formula in Exhibit 7
16:57:33 approximate the parallel plate capacitance of the
16:57:38 parallel plate capacitor represented in the Court's
16:57:42 Claim Construction Order, Exhibit 6?
16:57:46 A. I understand the "K", if I assume K is
16:57:56 the dielectric constant of some unstated material
16:58:05 between the plates, and I assume A is the same as the
16:58:09 plate area here, and I assume that where measuring
16:58:24 under DC -- measure months are DC -- and I assume "D"
16:58:35 is distance and that they're in the correct units --

16:58:45 and I'd have to go back and determine what the correct
16:58:49 metric units are -- that is a form -- that would be a
16:58:55 formula for capacitance in the correct unit.
16:58:59 Whether it's farads or microfarads, I'd
16:59:01 have to go back.
16:59:02 Q. And what are the units for dielectric
16:59:15 constance, K, in the middle of Exhibit 7?
16:59:17 A. I am aware of them usually being given
16:59:22 by a pure number, which starts as I believe one for
16:59:27 air, and usually goes up to tens of thousands, or
16:59:32 less.
16:59:34 Q. I see.
16:59:36 If I told you I'm using a dielectric of,
16:59:39 let's say, classical X7R, what would you expect its
16:59:44 dielectric constant to be?
16:59:49 A. Back in the 1990s, at the time the
16:59:51 patent was filed for, or presently?
16:59:55 Q. Back in the '90s when the patent was
16:59:59 filed for.
17:00:00 A. Let's assume we have --
17:00:01 Well, a typical number to assume,
17:00:05 then -- there's a range of numbers that could satisfy
17:00:08 it -- it might be 2,000.
17:00:10 Q. And for any other, let's say, type of
17:00:18 dielectric material, let's say Y5V, what would be a

17:00:23 typical dielectric constant for that type of material?
17:00:28 A. That's a commercial grade that I don't
17:00:30 deal often enough to be familiar.
17:00:36 I deal primarily in military and high
17:00:41 quality and commercial devices.
17:00:43 Q. So are you an expert in every type of
17:00:49 design of any capacitors, or is your expertise limited
17:00:53 to certain types of designs?
17:00:58 A. My expertise is limited to that range of
17:01:03 designs which tend to be used by high quality
17:01:12 commercial and the military and NASA.
17:01:20 Q. Do any of the ATC's capacitors, to your
17:01:28 knowledge, fall within your scope of expertise?
17:01:30 A. Oh, yes.
17:01:32 I've been to two ATC facilities a number
17:01:37 of times.
17:01:38 Q. Under what circumstances?
17:01:44 A. Under three sets of circumstances:
17:01:47 One, were they being considered as a
17:01:54 supplier to a particular high reliability military
17:02:05 application.
17:02:07 One, were they being audited to qualify
17:02:13 to deliver product to military specifications.
17:02:19 And third, as a result of some major
17:02:26 quality issues within the industry.

17:02:31 Q. And who else besides the ATC did the
17:02:38 third circumstance, the quality issues in the
17:02:41 industry, involve beyond ATC?
17:02:44 What other companies?
17:02:46 A. At various times, they have involved
17:02:52 other companies. This particular time was exclusive
17:02:55 to ATC.
17:02:56 Q. Could you name for me what were the
17:03:02 other companies who had similar quality issues at
17:03:09 different times than the ATC?
17:03:13 A. If by "similar" we just get to say
17:03:16 serious military and high grade commercial quality
17:03:20 issues, I would have to include AVX and Kemet and
17:03:35 Novacap.
17:03:37 And I'd have to go back into my records
17:03:39 to give you a complete list.
17:03:43 Phillips North American.
17:03:47 So we're depending upon a faulty memory
17:03:51 of 30 plus years of problem solving.
17:03:54 Q. Were there ever these quality issues
17:03:56 with any of the Presidio capacitors?
17:03:59 A. Not to my knowledge.
17:04:00 Q. Has Presidio --
17:04:03 Have you ever visited Presidio in
17:04:05 connection with your work at the

17:04:08 Aerospace Corporation?
17:04:09 A. Yes, I have.
17:04:10 Q. How many times?
17:04:14 A. Perhaps twice.
17:04:15 Q. And what were the occasions for that?
17:04:18 A. One was being part of a government
17:04:23 auditing team who audits them upon their applying to
17:04:30 produce product to a particular military
17:04:38 specification.
17:04:39 And, two, where one of our customer's
17:04:44 customer's was using or wanted to use some of their
17:04:51 commercial products in a space application.
17:04:56 Q. And could you tell me which Presidio
17:05:01 products were involved in both of those occasions?
17:05:07 A. I know the last time was a stacked
17:05:15 capacitor application.
17:05:18 I do not recall, since it's been a
17:05:21 number of years, what the first time was.
17:05:23 Q. It didn't involve any other capacitors
17:05:28 other than stacked capacitors, that second instance of
17:05:31 your --
17:05:32 A. No.
17:05:32 Q. And the first instance of your
17:05:36 government audit of Presidio --
17:05:37 A. I don't recall what particular type of

17:05:40 capacitor nor the specifications they were being
17:05:44 audited for.
17:05:44 Q. Did Presidio pass that government audit?
17:05:47 A. I believe so, yes.
17:05:48 Q. And what about the second time for the
17:05:51 space application?
17:05:53 A. The second time, I believe their product
17:05:55 was approved for use.
17:05:58 Q. Okay. And let's go back to the -- your
17:06:01 review of the ATC or visiting ATC for certain things.
17:06:07 I believe the first one you testified
17:06:10 about, the first instance was about a particular high
17:06:16 reliability product.
17:06:17 Was that an audit?
17:06:18 A. Yes.
17:06:19 Q. And what were the results of that audit?
17:06:23 A. I believe the audit identified -- this
17:06:29 was a audit of their Long Island facility -- and the
17:06:35 audit identified some corrective actions that would
17:06:41 have to be made before they could be approved.
17:06:48 Q. And were these corrective actions taken
17:06:53 by ATC, to your knowledge?
17:06:55 A. To my knowledge, they were taken at
17:06:58 least in part.
17:07:00 They supplied some specialty parts, but

17:07:02 only some specialty parts rather than across the
17:07:06 broadband for which they were being audited.
17:07:12 Q. So were they approved --
17:07:14 As a result of their remedial measures
17:07:18 that were specified by the audit, at the ends, were
17:07:21 they approved?
17:07:22 A. Partially.
17:07:23 Q. Not completely?
17:07:24 A. Not completely.
17:07:24 Q. And what would you say the percentage of
17:07:27 the approved versus nonapproved product, or what was
17:07:32 that to your knowledge?
17:07:35 A. That's been long ago that it would be
17:07:40 purely speculation on my part.
17:07:41 Q. When was it, approximately, that first
17:07:44 government audit of ATC that you were involved in?
17:07:48 A. Late '70s, 1980s.
17:07:50 Q. And the second audit about the quality
17:07:58 of the delivered product of ATC, when was that?
17:08:05 A. 1990s.
17:08:09 Q. Any more precision that you can give?
17:08:13 A. Not without going back to records.
17:08:14 Q. Do you have --
17:08:17 Have you documented all these steps of
17:08:19 the audit and the responses and all that?

A. Yes.

Q. And these would be the files that are at your house?

A. Some of them rest within the Aerospace Corporation for which I worked. Some of them rest within a government agency called DSCC.

Q. And are any of them classified as secret or top secret?

A. No.

Q. And the third time you had an occasion to go to ATC about the quality issues, when was that?

A. This was, again, in the 1990s.

Q. And what was the result of your inquiry into these quality issues at ATC?

A. As a result of the visit and continuing discussions and of a representative of ATC coming out to our facility to present findings once or twice, I believe we were satisfied that they both determined the time frame at which defective product -- let's call it questionable product -- was issued.

That they had correctly identified the root cause, and that they had corrected the root cause of the problem.

Q. Going back to our Exhibit 7 --

A. Yes.

17:10:12 Q. -- to the formula presented in
17:10:15 Exhibit 7, would you expect --
17:10:19 I'm sorry. Let me withdraw that
17:10:21 question.
17:10:22 Going back to Exhibit 6, which is the
17:10:26 Court's Claim Construction Order, and looking at the
17:10:29 second figure on that Page 2 which represents a fringe
17:10:35 effect capacitor between two metal plates in an
17:10:39 edge-to-edge relationship, is there a formula to
17:10:42 estimate capacitance formed between those electrodes,
17:10:49 to your knowledge, sitting here today?
17:10:54 A. I'm not personally conversant enough
17:10:59 with a formula that I could write it down.
17:11:01 I would expect there to be a theoretical
17:11:05 formula at least for doing that, yes.
17:11:07 Q. And where would you find that
17:11:15 theoretical formula if you were asked?
17:11:18 A. One, I would expect it to be in the
17:11:24 technical literature.
17:11:26 And, two, I would expect it to be in
17:11:28 some of the patents I've seen, which I'll talk about
17:11:32 such individual fringe effect capacitors.
17:11:35 Q. And what are those patents that you've
17:11:38 seen that talk about individual fringe effect
17:11:41 capacitance?

A. I'd have to look on my computer.

I Googled "fringe effect capacitors" as part of this work, read at least the abstracts of some of the patents that came up with that search, and saw that some of the abstracts at least mentioned formulas.

Q. I see.

Did you save the results of that search?

A. I saved the portions of the abstracts which were printable, yes.

Q. And how are they saved?

Are they in paper form or electronic?

A. They're in electronic form. I believe I copied them to a Word document.

Q. I see.

And would the abstracts that you've saved into Word document, did you indicate a particular patent number it came from or any --

A. That was part of the abstract.

Q. I see.

And what is the name of that document on your computer?

What's the file name?

A. I don't recall.

Q. Does it exist presently?

17:12:39 A. Yes.
17:12:39 Q. I would ask that you turn this over to
17:12:43 us.
17:12:43 A. Great. Let that be part of the list
17:12:45 you --
17:12:46 Q. Absolutely.
17:12:47 And one question.
17:12:49 So you've used that Google search in the
17:12:53 abstracts talking about fringe effect capacitors to
17:12:58 orient yourself in terms of this field?
17:12:58 Is that --
17:13:02 What was the purpose of that review?
17:13:03 A. To get a feel for the extent of use of
17:13:11 fringe effect capacitors, and the context in which
17:13:16 they were being used.
17:13:19 I was particularly interested in were --
17:13:24 A, were all of the fringe effect capacitors which were
17:13:28 in the patent literature talked about as a single
17:13:31 discrete element, or as part of something broader.
17:13:39 Q. I see.
17:13:43 And would it be fair to say that the
17:13:47 reason why you decided to do that was because you
17:13:50 haven't worked with fringe effect capacitances in the
17:13:54 past?
17:13:54 A. I have not worked with discrete fringe

17:13:57 effect capacitors in the past. That is correct.
17:13:58 Q. I see.
17:14:01 You've never measured a fringe effect
17:14:04 capacitance?
17:14:06 A. Correct.
17:14:08 I've not seen measured, nor have I
17:14:11 measured myself, discrete fringe effect capacitors.
17:14:15 Q. Any other fringe effect capacitors that
17:14:18 you have measured, yourself, in your regular course of
17:14:27 work as a skilled artisan?
17:14:30 A. I'm not usually in the -- where I do
17:14:36 measurements, myself. I usually ask a specialist in
17:14:41 using the equipment to make measurements for me. And
17:14:44 I've not had a chance to do so at the facility where I
17:14:48 work for discrete fringe effect capacitors.
17:14:53 Q. Do you mean --
17:14:55 Would it be fair to say that while you
17:14:57 were at the Aerospace Corporation, you've never had an
17:14:59 occasion to measure any type of fringe effect
17:15:04 capacitor --
17:15:05 A. As a discrete capacitor, yes.
17:15:08 Q. For any other --
17:15:10 As a nondiscrete capacitor, have you had
17:15:13 a chance to measure that?
17:15:17 A. I have had a chance to request the

measurements of what I would call an array, which may or may not have included fringe effect capacitors.

Q. And what was the name of that project?

How would you refer to that file where these measurements are?

A. I don't have that file. It has been some time ago. The file would be down in a particular laboratory of Aerospace, and I'm not even sure of the time frame of that work.

Q. So would it be fair to say that you were not relying on those measurements in preparation of this declaration and this work?

A. It would be more than fair. It would be accurate.

Q. Thank you.

And have you followed the literature on fringe effect capacitors in the technical literature in the course of your work at the Aerospace Corporation?

A. Only in the specific context of microelectromechanical and nano devices, the first being called MEMS, all in capital, microelectromechanical devices, and the other is nano technology devices.

I got interested sometime in how

17:17:10 capacitors would be used in this frequency range,
17:17:15 where they were shrunk so far. And they were being
17:17:18 primarily used in RF applications where I came across
17:17:22 specific embodiments of the devices in this very
17:17:29 shrunken world.

17:17:31 Q. And by "very shrunken world", what are
17:17:35 the sizes you're referring to?

17:17:37 A. MEMS tend to be in millionths of a
17:17:45 meter. And nano technology seams to be in billionths
17:17:48 of a meter.

17:17:49 Q. And you were referring to capacitors
17:17:51 made on that scale?

17:17:52 A. Yes.

17:17:52 Q. And those capacitors had fringe effect
17:17:59 in them, to the best of your understanding?

17:18:03 A. At this distant point of time, yes.

17:18:05 Q. And what were the frequency ranges for
17:18:10 those MEMS and nano technology that you've encountered
17:18:16 and considered the capacitors for?

17:18:19 A. I don't recall at this point in time.

17:18:21 Q. And what would be --

17:18:25 What would you need to do if I asked you
17:18:28 to produce those documents about fringe effect in the
17:18:32 MEMS capacitors and the nano technology capacitors?

17:18:38 A. I have a technical publication which I

17:18:43 could -- which I put out and is listed in my C.V. And
17:18:49 that lists the key references I used at that time.
17:18:56 I expect I also have some of the key
17:18:59 references, additional references in electronic
17:19:03 format, that given the effort, I could re-pull out of
17:19:09 my electronic library.
17:19:10 Q. I understand.
17:19:12 Have you reviewed those -- your own
17:19:18 paper about MEMS -- fringe effect and MEMS and nano
17:19:23 technology in preparation of this declaration?
17:19:25 A. No, I have not.
17:19:26 Q. And have you relied on what you remember
17:19:28 about that in preparation of this declaration?
17:19:31 A. Only as a general understanding of the
17:19:36 existence and use of fringe effect capacitors.
17:19:40 Nothing more specific.
17:19:40 Q. Okay. And if you'll look at your
17:19:47 declaration, which is Exhibit 2 --
17:19:49 A. Okay.
17:19:50 Q. -- on Page 2, the same list of documents
17:19:56 that you've used for this declaration, I don't see
17:20:03 the -- a listing for the results of the Google search
17:20:06 and the Word document you've created.
17:20:09 Is that document --
17:20:12 Should that document be added to this

17:20:14 list to make it accurate?

17:20:15 A. No.

17:20:16 That was used not in terms of a review

17:20:24 sense, but used in terms of general familiarity.

17:20:29 Q. What other materials have you used in

17:20:31 the sense of general familiarity while you were --

17:20:38 A. I looked at a number of technical

17:20:43 documents to see whether there were technical

17:20:48 definitions for "monolithic" -- and there weren't --

17:20:53 and for the documents that I reviewed.

17:20:57 Q. Any other definitions you've attempted

17:21:02 to locate?

17:21:04 Let's say -- Let's look at the Claim

17:21:06 Construction Order on Page 16, which is Exhibit 6.

17:21:10 A. Exhibit 6, Page 16.

17:21:12 Q. That's the --

17:21:12 A. Thank you.

17:21:14 Q. You're welcome.

17:21:30 A. No.

17:21:31 Q. And what were the technical documents in

17:21:33 which you tried to locate the definition of

17:21:38 monolithic?

17:21:38 A. There were a number of properties

17:21:43 describing the mechanical behavior of multi-layer

17:21:48 ceramic capacitors. And I was interested to see

17:21:51 whether they talked about monolithic, and if so, in
17:21:56 what context.

17:21:57 Q. I see.

17:21:58 I believe you said there were a number
17:22:00 of properties.

17:22:02 Are you referring --

17:22:03 There were a number of papers or
17:22:04 articles?

17:22:05 A. Yes.

17:22:05 Q. And who was the --

17:22:08 Who were the authors of those articles?

17:22:11 A. A wide variety of both U.S. and European
17:22:15 authors.

17:22:16 Q. Do you have a list of those publications
17:22:19 that you've reviewed for that purpose?

17:22:22 A. In my technical library, I have two or
17:22:26 three folders full of the papers.

17:22:27 Q. Have you reviewed all those two or three
17:22:30 folders?

17:22:31 A. I went through and picked out those I
17:22:35 thought would be most fruitful. And while I did not
17:22:39 review them, I looked to see if they used the word
17:22:43 "monolithic." And if so, whether they gave any
17:22:47 definition related to monolithic.

17:22:49 Q. I see.

17:22:50 Could you please give me a -- to the
17:22:53 best of your recollection sitting here today, of
17:22:57 the -- either the titles of the papers or the names of
17:23:00 the authors that you've reviewed for the purpose to
17:23:03 find their use of the word "monolithic"?
17:23:07 A. The one author I recall as appearing
17:23:12 most frequently was Jim Bergenthal of Kemet
17:23:19 Corporation. And I believe that's B -- Bergen --
17:23:26 B-e-r-g-e-n-t-h-a-l.
17:23:32 But that's purely --
17:23:35 Q. Anybody else?
17:23:36 A. -- off the top whom I recall.
17:23:37 No.
17:23:39 MR. SLONIM: Okay. Let's change the tape.
17:23:41 THE VIDEOGRAPHER: This marks the end of tape
17:23:42 Number 3 in the deposition of Gary Ewell.
17:23:46 Going off the record.
17:23:46 The time is 17:23 hours.
17:23:50 (Whereupon a recess was taken)
17:34:41 THE VIDEOGRAPHER: Back on the record.
17:34:48 Here marks the beginning of tape
17:34:50 Number 4 in the deposition of Gary Ewell.
17:34:53 The time is 17:34 hours.
17:34:55 BY MR. SLONIM:
17:34:57 Q. Dr. Ewell, what does the term "one" mean

17:35:00 to you?

17:35:01 A. That's "one" spelled o-n-e?

17:35:05 Q. Correct.

17:35:10 A. I don't see it as a particularly
17:35:13 technical term, but certainly, it means a single
17:35:16 individual item.

17:35:20 If it were used as an adjective as in
17:35:23 one shoe, one horse, one capacitor.

17:35:25 Q. Okay. What does the term "first" mean
17:35:32 to you?

17:35:40 A. I see the term "first" as relating to
17:35:46 ordering of events, whether it's a time ordered or a
17:35:52 geometric ordering, as opposed to second, third or
17:36:00 fourth.

17:36:00 Q. Does "one" mean the same thing as
17:36:03 "first"?

17:36:08 A. Not necessarily. If I have one shoe,
17:36:14 it's not the first shoe. I have one shoe.

17:36:20 Q. And what would you consider to be the
17:36:21 first shoe?

17:36:27 A. I got up this morning. I put on two
17:36:31 shoes. And one of them was the first, and one of them
17:36:34 was the second.

17:36:35 Q. Can they be used interchangeably, "one"
17:36:42 and "first"?

17:36:46 A. There may be circumstances where they could --
17:36:48
17:36:52 Q. Are you aware?
17:36:54 A. -- in a philosophical sense.
17:36:57 Q. Are you aware of any such circumstances sitting here today as a deponent expert witness?
17:36:59
17:37:06 A. Nothing comes to mind without some sort of context.
17:37:09
17:37:11 Q. Did you opine in your declaration on the meaning of the word "first"?
17:37:16
17:37:19 MR. SCHATZ: I'm going to object to the extent it requires refreshing recollection through review of the declaration.
17:37:21
17:37:27
17:37:27 BY MR. SLONIM:
17:37:28 Q. You may answer.
17:37:29 MR. SCHATZ: In other words, I'm counseling the witness not to speculate.
17:37:31
17:37:31 BY MR. SLONIM:
17:37:32 Q. You may answer.
17:37:35 A. In the context of the 356 patent and my declaration, I'd certainly have to read what I'd said to remind me of the context of "first" and "second" use and "one" and "two" --
17:37:39
17:37:44
17:37:50
17:37:53 Q. So is it your testimony --
17:37:57 How long ago did you prepare your

17:38:00 declaration?
17:38:01 A. I'd have to look at the date I signed it
17:38:03 and subtract it from today's date to get there in
17:38:08 terms of exact number of days or hours.
17:38:10 Q. I would represent to you that you've
17:38:20 signed the declaration on July 11th.
17:38:22 A. July 11th.
17:38:23 Q. And today is August 1st.
17:38:26 How many days is that between those two
17:38:29 events, please?
17:38:30 MR. SCHATZ: That's ridiculous. That is a --
17:38:34 That question is designed to harass.
17:38:37 If you want to count the days between
17:38:41 August 1st and July 11, then you can do that,
17:38:44 yourself.
17:38:44 MR. SLONIM: Off the record, please.
17:38:45 MR. SCHATZ: No, we're on the record.
17:38:47 And this witness is not here to testify
17:38:50 as to the number of days between today's date and when
17:38:54 his declaration was signed.
17:38:58 That's a frivolous question, and it's
17:39:01 clearly designed just to harass and delay these
17:39:05 proceedings.
17:39:07 MR. SLONIM: I completely disagree. I think
17:39:09 Mr. Schatz's comments are very inappropriate in this

17:39:14 context.
17:39:18 Q. Dr. Ewell, without refreshing your
17:39:22 recollection, what do you remember that you've -- what
17:39:25 opinions did you express in your declaration submitted
17:39:29 to the Court on July 11th about the meaning of the
17:39:33 word "first" and the meaning of the word "one"?
17:39:38 MR. SCHATZ: And I'll object and counsel the
17:39:40 witness not to speculate if it requires review of the
17:39:43 declaration.
17:39:43 BY MR. SLONIM:
17:39:45 Q. You may answer.
17:39:49 A. My only recollection, without further
17:39:52 review of declaration, has to do with the relative use
17:39:57 of the words "first" and "second".
17:40:00 I do not recall counterposing or
17:40:04 contrasting "first" and "one".
17:40:08 But upon review of the declaration, I
17:40:11 could well be refreshed in that regard.
17:40:16 Q. But sitting here now --
17:40:19 A. Yes?
17:40:20 Q. -- do you have an opinion about the use
17:40:24 in the context of the 356 patent about the meaning of
17:40:28 a first fringe effect capacitance in connection with
17:40:34 which element you've expressed your opinion about the
17:40:37 meaning of the word "first"?

Do you have that recollection?

A. In the context of the 356 patent and the words "first" and "second" as describing fringe effect capacitors, yes, I do.

Q. And what was that --

What is your opinion on that subject?

A. As one of ordinary skill in the art, I believed it made sense to me to consider first and second fringe effect capacitors as related to some sort of progression of geometric ordering or designation of those capacitors as elements within a larger array.

Q. And could you elaborate about what is the progression of geometric ordering?

And if you need to review any of the figures in the patent and do that in reference to that, please feel free to do so.

And I think the patent is Exhibit 3, the 356 patent.

A. Can you repeat your question again now with respect to the words "first" and "second" as applied to fringe effect capacitors?

Q. Yes.

But after you would tell me what you were doing in response to my question before.

17:44:17 What parts of the patent were you
17:44:19 reviewing?
17:44:20 A. I reviewed Claims 1, 2 and 3.
17:44:32 Q. Okay.
17:44:34 A. And I particularly looked at I believe
17:44:43 it was Figure -- must be Figure 12.
17:44:56 I particularly looked at Figure 12A, is
17:45:04 there a patent 356.
17:45:06 Q. And in connection with Figure 12A, what
17:45:11 were you considering?
17:45:15 A. I was looking at the bottom -- the lower
17:45:24 end, the bottom end of the device.
17:45:30 I was looking at the exterior surface.
17:45:35 I was furthermore looking at the dark
17:45:40 lines on the exterior surface by which I took to be
17:45:45 electrically conductive material.
17:45:50 And I was focusing upon the spacing
17:45:55 between the ends of that electrically conductive
17:45:58 material on the bottom surface there.
17:46:04 Q. And would I be correct to understand you
17:46:07 to say that you were looking at the electrically
17:46:11 conductive plates labeled 141, 143 and 142 in
17:46:19 Figure 12A of the 356 patent?
17:46:22 A. That was part of my consideration of
17:46:26 12A, yes.

17:46:27 Q. And what is -- What spacing were you --
17:46:34 Were you looking at the spacing between
17:46:36 plate 141 and 143?
17:46:39 A. And 143 and 142.
17:46:43 Q. And what do you understand those
17:46:44 spacings to be?
17:46:47 A. I understand those spacings to be
17:46:52 surfaces of the dielectric which are free from
17:46:56 electrically conductive material.
17:47:01 They're not covered by a black line,
17:47:04 which I assume means they're not covered by
17:47:07 electrically conductive material at that location.
17:47:09 Q. Would you call those distances between
17:47:13 141 and 143 a gap?
17:47:16 Is that a common term in your field?
17:47:19 A. It's a gap between the ends of the
17:47:23 conductive material, yes.
17:47:25 Q. With that clarification, I agree.
17:47:28 And what do you understand that gap
17:47:31 distance to be from Figure 12A?
17:47:35 A. It provides no measurement.
17:47:41 Q. Could you estimate based on Figure 12A
17:47:45 what that gap is?
17:47:52 A. 12A has no dimensions associated with
17:47:56 it. It's purely a schematic.

So I cannot estimate in terms of fractions of an inch or specific measurements.

Q. Could you estimate based on comparison between the gap between plates 141 and 143 and the gap between contacts 12 and 13 on the bottom of the capacitor of Figure 12A?

A. No.

Q. Why not?

A. The overall -- Among other things, the overall scale of the capacitor represented by this schematic is not given. I have no knowledge of knowing whether it's one inch from edge-to-edge or a tenth of an inch.

Q. Let's say I told you this capacitor was produced in 0603 capacitor packaging.

With that information, would you be able to compare these gaps?

A. I'd be able to speculate on what the dimensions of the gaps are.

But this is meant -- this is a schematic. And I believe detailed dimensions off of a schematic are not accurate.

If it were a cross section now, you know, I'd blow it up to 500x and measure it precisely.

Q. Assuming that this was to 500x, would

17:49:53 you be able to measure it precisely, assuming this is
17:49:57 the -- Figure 12A is a cross section to 500x?
17:50:01 MR. SCHATZ: Objection. Calls for
17:50:03 speculation.
17:50:07 You're asking the witness to speculate
17:50:09 what Figure 12A is, what it's not.
17:50:15 It calls for speculation.
17:50:15 BY MR. SLONIM:
17:50:16 Q. You may answer in your expert opinion.
17:50:19 Would you be able to offer that expert
17:50:21 opinion sitting here today with your great length of I
17:50:27 think stated service for Aerospace Corporation as well
17:50:30 as others?
17:50:33 A. That if I knew that --
17:50:38 If this were a microstructure at a
17:50:44 specific known magnification and it were accurate, and
17:50:51 I had a calibrated measuring rule, that I could guess
17:51:00 at this particular point of cross section what the gap
17:51:05 was.
17:51:08 Now, that -- I also know that as I were
17:51:12 to grind further through the cross section, that gap
17:51:16 distance may vary.
17:51:21 Q. So is that your testimony, that based on
17:51:25 the appearance of Figure 12A, it cannot be estimated
17:51:36 and offered to the Court?

17:51:37 Any relationships between gaps or
17:51:42 comparisons or areas would be inappropriate because
17:51:46 they would not be accurate.
17:51:47 Is that your testimony?
17:51:51 A. That use of this figure in total to try
17:51:56 to make measurements from would be inherently
17:52:01 inaccurate. It's not a real product. Unlike real
17:52:09 product to be able to measure in order to determine
17:52:14 properties from them.
17:52:17 Q. And so if I told you that this is a
17:52:22 representation of the microstructure at 500x, would
17:52:28 you then be able based on that understanding that
17:52:31 that's what Figure 12A is, measure and estimate the
17:52:40 relationship between gap -- of between plates 141 and
17:52:48 143, and the gap between 12 and 13 on the bottom, and
17:52:52 compare them in terms of mils?
17:52:55 Is that the standard measurement for
17:52:58 gaps?
17:52:58 A. Yes.
17:52:58 Q. Okay.
17:52:59 A. Yes.
17:52:59 Q. Would you --
17:53:02 A. If this were an accurate microstructure
17:53:07 and I knew the magnification and I had an accurate
17:53:11 measuring tool in the frame there, I could measure

17:53:15 those gaps and provide dimensions.
17:53:18 Q. But just based on the appearance of
17:53:24 Figure 12A as a cross section represented here in the
17:53:30 patent, is that your testimony, that the appearance of
17:53:35 these gaps is inaccurate and unreliable?
17:53:40 A. No. It's schematic and an educational
17:53:46 tool that goes along with 12B, which is a -- an
17:53:52 electrical representation of 12A in terms of its array
17:53:58 of elements.
17:54:03 And that with my experiences, one of
17:54:10 ordinary skill in the art, that given this, I could
17:54:18 design or have designed a capacitor meeting 12B, and
17:54:26 on that capacitor design to meet that, I could measure
17:54:32 those exterior gaps.
17:54:35 I could not measure the interior gaps
17:54:40 well below the gaps within the body that are below
17:54:50 what we've called 141, 143 and 142.
17:54:54 Q. And why is that?
17:54:56 A. Because they are not as clearly evident.
17:55:06 The very process of polishing and
17:55:12 grinding flat surface serves to -- you can fragment
17:55:19 and break out things that -- so you have an appearance
17:55:23 which isn't -- which may not be strictly accurate.
17:55:27 I'd much prefer to measure the finished
17:55:29 product and its properties.

17:55:32 Q. Are you saying that when you're grinding and trying to create these cross sections, you can introduce additional defects or fractures into --
17:55:43 A. Artifacts.
17:55:44 Q. Artifacts?
17:55:46 A. Artifacts, we call them, yes.
17:55:47 Q. Which were not present in the capacitor before you started grinding and testing and just looking at it and --
17:55:52 A. That is correct.
17:55:54 There is an expertise to doing that. There's a certain suspicion you need to have, particularly when apparent defects are located on the extreme surfaces.
17:56:10 Q. And what is that expertise called?
17:56:17 A. Experience in polishing and grinding of a variety of ways and of looking at what appears to be defects to see whether they're recent or whether they were present in the particular part of concern.
17:56:32 Q. How would you be able to distinguish between recent and old defects?
17:56:40 A. A couple of ways.
17:56:41 Should I further explain it?
17:56:44 Q. Yes, please.
17:56:46 A. One, these parts are often encapsulated

17:56:51 in a protective material to be there.
17:56:56 If for instance there are cracks at the
17:56:58 time of encapsulation and the encapsulation is --
17:57:04 material has a low viscosity such that it flows easy,
17:57:09 it will flow into the cracks.
17:57:11 And when you cross section, you'll see a
17:57:14 crack with some of that material in it. Clear sign it
17:57:17 was present before you began to ground.
17:57:25 If you have a near surface void or
17:57:29 cavity that was there when the part was fired and
17:57:36 formed, you see a surface topography inside there
17:57:42 which is particular. It shows some rounding of
17:57:48 nodules. And this relates to what was formed during
17:57:50 the sintering process.
17:57:53 If it broke out when you were polishing
17:57:55 it, you'll see jagged edges and particular hard
17:57:59 fracture surfaces.
17:58:03 Those are two examples of how you might
17:58:05 pick up the difference between defects before and
17:58:08 after.
17:58:11 Q. And would you expect to see those types
17:58:15 of clearly distinguishable defects on a photograph
17:58:21 under the microscope after that grinding and polishing
17:58:24 was done?
17:58:27 A. It's a clue as to the quality of that

17:58:29 effort.

17:58:32 If I see those and they indicate to me
17:58:38 that quite possibly artifacts were introduced during
17:58:42 the polishing and grinding process, I will inquire
17:58:46 more on the details of sample preparation.

17:58:54 Q. And that inspection that you would do
17:58:58 would be visual?

17:59:00 A. Visual and under what we called before
17:59:03 the scanning electron microscope.

17:59:07 Q. To magnify the picture?

17:59:09 A. It magnifies it and it gives it much
17:59:12 greater depth of field.

17:59:15 Q. And then once that is done by the
17:59:17 microscope, your inspection is visual?

17:59:20 A. Yes. You look on the screen of the
17:59:23 microscope visually.

17:59:25 Q. I see.

17:59:28 And would two different people who are
17:59:30 reviewing the same sample, could they disagree about
17:59:33 the origins of different defects and voids?

17:59:39 A. There are some which are a rough call on
17:59:44 a professional basis, some which are obvious and have
17:59:47 been seen before and are well known to be artifacts.

17:59:53 Q. And what is a small void?

18:00:01 A. "Small" is a relative term. It's

18:00:05 usually relative to the thickness, the minimum
18:00:12 thickness of the dielectric layer.
18:00:17 If I have a 1 milli-inch, mill-thick
18:00:22 dielectric layer, small would generally be less than
18:00:25 half a mil.
18:00:28 Q. What would be a minor void?
18:00:32 A. Again, with respect to 1 milli-inch
18:00:36 thick dielectric, a minor void would be something like
18:00:40 10th of a mil.
18:00:41 Q. And in general, what would be a minor
18:00:43 void, not with reference to the one mil dielectric?
18:00:50 A. It's always with reference to what we
18:00:52 call the active thickness, which is the thickness
18:00:59 between internally conductive plates of opposite
18:01:04 polarity.
18:01:05 Q. What's the difference between a void and
18:01:08 gap?
18:01:13 A. A void tends to be circular in cross
18:01:19 section.
18:01:22 A gap can be much more irregular and can
18:01:27 occur along -- it's a more two-dimensional effect
18:01:33 where it may look something like this where you've not
18:01:37 had complete sintering across a seam.
18:01:45 Q. So that would be a gap?
18:01:48 A. That would be a gap.

18:01:49 Q. Would you also call it a delamination?
18:01:56 A. It could have been formed by delamination, yes. That's one of the processes for forming gaps.
18:02:08 Q. Is delamination as an object different from a gap?
18:02:18 Not as a process, but as an object.
18:02:21 If the word "delamination" can refer to an object as opposed to a process.
18:02:27 A. Yes.
18:02:39 Again, they shade into each other.
18:02:42 A delamination tends to be where there's a very fine separation, and it's very long in dimension.
18:02:53 Q. And what is a fine separation?
18:02:55 A. A fine separation can be, for instance, one one-hundredth of a milli-inch.
18:03:03 Q. Can it be higher?
18:03:05 A. It's again a relative term. And it's used primarily with respect to --
18:03:14 A delamination has a spacing or a separation which is fairly constant, and very long in extent.
18:03:27 Q. And what is a very long in extent?
18:03:33 A. It can be -- and you're talking about

18:03:37 terms now which are not precisely defined -- but it
18:03:43 could -- if I had one one-hundredth of a milli-inch,
18:03:48 it could extend for 40 milli-inches. So that's quite
18:03:53 a ratio of gap to extend.
18:04:00 And the gap on a delamination is fairly
18:04:04 constant.
18:04:04 Q. What's that ratio called?
18:04:10 A. I've not seen it called something. I've
18:04:14 not seen it given a name by itself.
18:04:16 Q. Could different people use different
18:04:19 ratios?
18:04:25 A. As to the extent of a typical
18:04:28 delamination, yes, it would depend upon their
18:04:32 experience.
18:04:33 Q. Would there be a difference between two
18:04:36 people of ordinary skill in the art?
18:04:39 Could they disagree about whether a
18:04:41 certain defect is a delamination or not based on the
18:04:49 fine separation and the extent of the length and the
18:04:52 other parameters that are relative terms?
18:04:57 A. I believe 90 percent of the time, they
18:05:00 would agree.
18:05:02 There may be some extreme cases where
18:05:05 there would be disagreement.
18:05:07 Q. And what do you base your belief about

the 90 percent of agreement on?

A. By the fact that I have been in discussions a lot of time with manufacturers about whether their parts contained delaminations or not.

And we would bring in pictures, microsections. And usually there their technical people would say, yes, that's a delamination. We've seen it before. We know how to solve it. We were all talking the same terminology.

Q. Could you imagine that those technical people felt a little pressure to agree with a government inspector such as yourself on the terminology?

A. Lots of times, we were in technical meetings where our roles as government inspector and representative of a manufacturer were set to one aside, and we were technical people trying to arrive at technical agreement for the good of the industry.

Q. But that did not change the fact that you wore your government inspector hat at certain times or had that badge in your pocket.

Would that --

A. Over the last few decades, a major company's government business would be three percent of its commercial business.

18:06:58 So the government -- the government's
18:07:02 amount of business held very little sway compared to
18:07:05 their overall business.
18:07:17 They made, unfortunately, many more
18:07:21 iPhones and iPods than satellites.
18:07:24 Q. If we can go back to Figure 12A and
18:07:28 Figure 12B in the Exhibit 3, the 356 patent.
18:07:32 A. Okay. Let me take a sip first, please.
18:07:35 Q. Absolutely. I will do the same.
18:07:45 A. And, again, 12A and 12B were being seen
18:07:49 in conjunction with the reading of Claims 1, 2 and 3.
18:07:55 Q. That's fine.
18:07:56 If you could look at Figure 12 B, on the
18:08:01 very bottom of it, I see a line labeled 141, and then
18:08:08 I believe there's a schematic representation of a
18:08:11 capacitor that's labeled 144. And then it's -- the
18:08:18 capacitor 144 is formed between plates 141 and plate
18:08:24 143.
18:08:25 A. Yes.
18:08:25 Q. Is that your understanding of what that
18:08:27 represents?
18:08:28 A. Yes, that is.
18:08:29 Q. And then there is a capacitor 145 that
18:08:33 is also formed between plates 143 and 142?
18:08:39 Is that accurate?

18:08:40 A. Yes.
18:08:40 Q. Is there a capacitor between contacts 12
18:08:44 and 13 on top of that Figure 12A?
18:09:02 A. There is a -- Theoretically, there's
18:09:06 always a fringe capacitance which is formed there when
18:09:10 you have opposing ends. Whether it's determinable or
18:09:11 not, I'd have to determine.
18:09:15 Q. And would you say the same thing about
18:09:17 the bottom of Figure 12A, that there is a fringe
18:09:22 effect capacitance between bottom edges of 12 and 13?
18:09:31 A. Theoretically, yes.
18:09:32 Q. What about in Figure 12A?
18:09:37 Is that a yes about Figure 12A?
18:09:40 A. Oh, I thought we were referring to 12A
18:09:44 throughout the discussion there about wraparound
18:09:48 terminations 12 and 13.
18:09:50 Q. Correct.
18:09:50 So -- So in Figure 12A, there are two
18:09:55 fringe effect capacitances between ends of contacts 12
18:10:00 and 13: One on top, one on the bottom?
18:10:04 A. That is correct.
18:10:04 Q. Could you direct me in Figure 12B to a
18:10:09 capacitor on this equivalent circuit diagram which
18:10:17 represents the two fringe effect capacitances as you
18:10:23 said would be formed between contacts 12 and 13 on top

18:10:26 and bottom?

18:10:29 A. They are not shown, as they are
18:10:31 considered negligible compared to the ones which are
18:10:37 shown.

18:10:38 That's my interpretation for their
18:10:40 absence from Figure 12B.

18:10:43 Q. But otherwise, if you wanted to make a
18:10:47 complete representation of this capacitor, you would
18:10:51 include them on the equivalent --

18:10:55 A. I would include them, plus other
18:10:57 additional -- other additional ones not shown, yes.

18:10:58 If I were writing my doctorate in
18:11:01 physics, oh, it would be a wonderful, very complex
18:11:07 model.

18:11:07 Q. Okay.

18:11:15 A. It has gotten warm. They turned off the
18:11:16 air conditioning or something?

18:11:18 Q. I guess we're suffering from that
18:11:22 effect.

18:11:22 Okay. And what do you base your opinion
18:11:25 about this negligibility of fringe effect between 12
18:11:32 and 13?

18:11:34 A. By the apparent -- By the relative
18:11:39 distances.

18:11:40 If this is at all meant to be accurate,

18:11:44 the distances between the ends of 12 and 13, top and
18:11:49 bottom, is so much greater than that between 141 and
18:11:54 143 and 143 and 142, that in any determinable effect
18:12:02 where I were trying to measure it, they were probably
18:12:07 negligible.
18:12:07 Q. But you would be able to determine them
18:12:10 theoretically, even if they're negligible to some
18:12:13 extent by actual measurement?
18:12:15 A. I'd be able to put them in a expanded
18:12:19 version of 12B, which included everything.
18:12:23 Q. Okay. Okay.
18:12:25 A. I don't think I could -- I'm likely to
18:12:28 be able to -- if I measured a real part, detect their
18:12:34 contribution at all.
18:12:36 Q. Okay. Okay. So let's turn to Claim 1,
18:12:40 and Claim 1, only --
18:12:42 A. Okay.
18:12:43 Q. -- without consideration of Claims 2 and
18:12:47 3.
18:12:50 Claim 1 is what is called an independent
18:12:52 claim. It stands on its own.
18:12:54 A. Okay.
18:12:54 Q. Defines its own elements.
18:12:57 A. Okay.
18:12:58 Q. And if I can direct your attention to

18:13:03 Column 13 on the next page --

18:13:06 A. Got it.

18:13:07 Q. Where on Line 4 --

18:13:12 A. My version doesn't have lines.

18:13:14 Do I just count down?

18:13:16 Q. I think, yes. I guess Line 3, what I'm referring --

18:13:25 A. I'll read it.

18:13:25 Q. Absolutely.

18:13:26 What I'm referring to is this element that starts in the second context being located sufficiently close to the first contact to form --

18:13:38 And I want you to underline the word" a first".

18:13:43 A. Okay.

18:13:43 Q. Or maybe double underline.

18:13:45 A. Double underline. Great.

18:13:47 Q. The word "a first fringe effect capacitance with the first contact".

18:13:53 And my question to you is: How do you determine what is a first fringe effect capacitance in the context of Claim 1?

18:14:22 A. Okay. We are -- As I read Claim 1, Claim 1 is talking about conductive contacts or layers on the exterior of this body.

Q. Among other things?

A. Sure.

And it is simply -- I read that as simply stating that we have some external contacts --

And all of the drawings have drawn it in a wraparound configuration. That's what we call it?

So for each pair of wraparound configurations, there would be two fringe effect capacitors formed.

Q. Do you mean -- By "wraparound," do you mean it's on four sides of the capacitor?

A. If we look at it on a cross section, we see it as the ends and a top side and a bottom side.

Q. Okay. But if we're looking at it on a three-dimensional capacitor --

A. Right.

Q. -- would you expect that to be on all the -- as a wraparound, is that on all four sides, top -- or actually, five sides, top, bottom, front, end and maybe right?

Is that what you would understand a wraparound contact to be?

A. Yes.

Let me restate it.

If I had this transmitter device and I

18:16:07 formed a wraparound contact around this end, the
18:16:11 primary plate -- the primary surface it would cover
18:16:16 would be this end, but it would overlap on four
18:16:19 additional sides.

18:16:21 Q. Okay.

18:16:23 A. And, in deed, they are formed by dipping
18:16:26 in a liquid such that you in deed get some wetting or
18:16:33 overlap on four sides and complete coverage of one
18:16:38 side.

18:16:38 Q. I see.

18:16:39 Okay. And you would expect the contact
18:16:43 on the other side to be formed by dipping, as well?

18:16:43 A. Yes.

18:16:48 Q. As a wraparound contact?

18:16:50 A. Yes.

18:16:50 Q. And so let's say that both of them are
18:16:52 formed that way.

18:16:53 So if we were to count the sides on
18:16:58 which the fringe effect or over which fringe effect
18:17:03 could be formed, would you agree with me, then, it
18:17:05 would be formed on the top side between the edges of
18:17:08 the contact, on the bottom side between the edges, on
18:17:11 the front side facing, you and on the distant side
18:17:17 away from you?

18:17:19 A. They would only be formed on the top and

18:17:26 bottom sides -- we talked about this orientation --
18:17:31 because we need an internal -- we need a pure
18:17:42 dielectric layer between them.
18:17:45 This exists most commonly in the top and
18:17:48 the bottom.
18:17:50 If I had no internal electrodes come out
18:17:54 to the sides, they would also exist there.
18:17:57 Q. Okay.
18:17:59 A. Given that --
18:18:00 Q. Given that assumption that --
18:18:02 A. That description.
18:18:03 Q. That all the four sides are -- the
18:18:07 layers on the four sides of the --
18:18:10 A. Are all metal free.
18:18:14 Q. All metal free, meaning dielectric or an
18:18:19 insulator --
18:18:21 A. Yes.
18:18:21 Q. -- ceramic.
18:18:22 Then you would expect fringe effect
18:18:24 between wraparound contacts to form on those four
18:18:30 sides?
18:18:30 A. Yes.
18:18:30 Q. And with that understanding, would
18:18:34 you -- how would you be able to tell me out of those
18:18:39 four which one is what Claim 1 refers to with the word

18:18:45 you've circled as a first fringe effect?
18:18:58 A. An extremely typical way to cross
18:19:02 section capacitors, one which would be understood by
18:19:05 one of ordinary skill in the art, would be to cross
18:19:11 section in this orientation such that I grind through
18:19:15 this way, and I produce surfaces looking like this.
18:19:22 Q. And I'm sorry to interrupt you.
18:19:25 Just to make the record clear, by this,
18:19:29 when we use a figure in the pad -- and I believe it's
18:19:36 a representation of Figure 9 made there -- I think
18:19:39 they're identical?
18:19:40 A. They're very close, yes. Figure 9A is
18:19:43 good enough.
18:19:44 Q. And when you were saying that you would
18:19:45 do it in a cross section doing it this way, how would
18:19:49 you define that?
18:19:49 Is that longitudinal?
18:19:53 How would one of ordinary skill call
18:19:55 that cross section?
18:19:56 What's the technical term so the record
18:19:59 is accurate?
18:19:59 A. Okay. It is in a direction
18:20:08 perpendicular to the electrode plates and parallel to
18:20:19 the termination edges, the major termination edge.
18:20:24 And that's this long distance as opposed

18:20:27 to this short distance.

18:20:28 Q. Okay. And if you can continue with your

18:20:32 answer.

18:20:32 A. Sure.

18:20:35 Those being what we have here by --

18:20:42 Because we cross sectioned it at that

18:20:46 angle, the discussion has only been about the fringe

18:20:51 effect between these wraparound faces.

18:20:57 And first and second, I would say top

18:20:59 and bottom or whatever order they happen to be

18:21:03 discussed in, and I consider it arbitrary.

18:21:08 Q. So you can call the top one the first

18:21:11 and I can call the bottom one the first?

18:21:13 A. Sure.

18:21:13 Q. Is that the bottom line?

18:21:16 No pun intended.

18:21:18 A. Some of us work from the top down.

18:21:23 Q. Okay. And if you've done -- And if you

18:21:28 were to do a cross section in the other direction and

18:21:33 then see on the other two sides of the wraparound

18:21:36 context, you will have two additional fringe effects.

18:21:42 And out of those four, how would you be

18:21:48 able to select a first one out of four?

18:21:54 A. It would relate to your discussion in

18:22:01 the construction of these devices, and to the

18:22:06 schematic sketches that we talk about.
18:22:09 I believe the numbering system always
18:22:14 goes increasing in number from top to bottom of
18:22:20 layering of elements in a complex device such as 9A,
18:22:26 such as 11A.
18:22:29 And I'd be consistent by saying he
18:22:31 probably means the first -- to be the first one
18:22:35 encountered on the top and the second one to be the
18:22:38 second one encountered on the bottom.
18:22:40 Q. Does Claim 1 require a second fringe
18:22:44 effect if you could take a look at the --
18:22:46 A. May I look at --
18:22:47 Q. Absolutely.
18:22:48 A. -- Claim 1?
18:23:13 I do not see Claim 1 as discussing a
18:23:16 second fringe effect capacitance.
18:23:18 Q. So based on that absence of requirement
18:23:22 for the second fringe effect, do you agree with me
18:23:26 that the Claim 1 does not require a second fringe
18:23:30 effect?
18:23:33 A. The -- My interpretation of -- based
18:23:38 upon your statements as to the independence of claims
18:23:42 and the dependence of claims and assuming that all of
18:23:46 the discussion before we get to claims does not apply,
18:23:52 it may well be.

18:23:53 I were -- If I were more fully
18:23:56 instructed by you and had we time, you would say, Gary
18:24:00 you must consider all of these other figures in the
18:24:04 discussion when you consider Claim 1.
18:24:09 Q. So with the caveat that you may
18:24:17 discover -- that you may change your opinion upon
18:24:21 further review of the patent, does the literal
18:24:26 language of Claim 1 require by words a second fringe
18:24:37 effect capacitance?
18:25:12 A. I do not -- At first reading, I do not
18:25:15 believe it does.
18:25:17 Q. How many times have you read Claim 1
18:25:19 before today?
18:25:24 A. Four or five.
18:25:29 I learn something new each time I read
18:25:31 the bible, too.
18:25:34 Q. But the four or five times you've
18:25:37 reviewed Claim 1 was sufficient for you to submit a
18:25:42 declaration to the Court expressing your opinions?
18:25:45 A. On the particular meaning of the terms I
18:25:49 expressed opinions on as one of -- as relating to how
18:25:54 one of ordinary skill in the arts would interpret them
18:25:58 apply them, yes.
18:25:58 Q. Okay. And based on the fact that I
18:26:05 think you've agreed with me with your caveats --

18:26:09 A. Caveats.
18:26:09 Q. -- that Claim 1 does not require a
18:26:11 second fringe effect.
18:26:12 A. Right.
18:26:12 Q. Let's say we'll look back at Figure 12A?
18:26:20 A. Figure 12A.
18:26:21 Okay. Is there a context of Figure 12A?
18:26:26 Q. I just want to ask you a hypothetical
18:26:28 question.
18:26:29 A. Okay.
18:26:29 Q. Based on your understanding --
18:26:32 A. But I'm just reading --
18:26:33 Q. Absolutely.
18:26:34 A. A fourth embodiment of an integrated
18:26:37 wide band capacitor.
18:26:38 Okay.
18:26:44 Q. So in Figure 12A, between contacts 12
18:26:48 and 13, at least in cross section, you see that there
18:26:56 would be two theoretical fringe effect capacitances
18:27:00 formed on top and the bottom of the dielectric body?
18:27:03 A. Yes.
18:27:03 Q. Is that --
18:27:04 A. Yes.
18:27:04 Q. And if I wanted to --
18:27:10 And Claim 1, you've agreed with me, only

18:27:12 requires a first fringe effect capacitance?
18:27:16 A. (Witness nods).
18:27:17 Q. And based on that, if I were to
18:27:18 eliminate or make a first fringe effect capacitance,
18:27:27 negligible or small, and only utilize a second fringe
18:27:32 effect capacitance, only have that theoretically,
18:27:36 would you say my capacitor falls within the scope of
18:27:41 Claim 1 if it does not have a required first fringe
18:27:47 effect capacitance but has a second not required one?
18:27:51 A. Let me look at the Claims
18:27:53 Construction --
18:27:53 Q. Absolutely.
18:27:54 A. -- in that Exhibit 6.
18:27:59 And again, I think I'm going to the very
18:28:02 end.
18:28:15 I believe the key here is determinable
18:28:22 capacitance. I believed if you eliminated the first
18:28:30 of two fringe effect capacitors, it became
18:28:36 immeasurable and indeterminable, and therefore, was
18:28:38 not defined in these terms as a fringe effect
18:28:42 capacitor.
18:28:43 Then the second, which we assume remains
18:28:46 determinable, could then be considered the first
18:28:49 determinable fringe effect capacitor.
18:28:58 Q. And by "determinable", are you limiting

that term as used by the Court in the Claim Construction to measurable?

A. Not in terms of having to be directly measurable.

But it could be determined through subtraction of -- by measuring properties of the array, itself, with or without that particular capacitor. And then we'd simply subtract to find out what was the specific component contributed by that fringe array capacitor.

Q. And what is your understanding that Claim 1 claims?

Does it claim an array of capacitors?

A. May I read Claim 1 again, please?

Q. Absolutely, yes.

And what I would like you to do upon that review of Claim 1, if you could draw me a cross section of a capacitor, having all the elements, all the required elements of Claim 1.

A. Okay.

Q. And I will -- I hope I have a piece of paper that I can give you to do that.

MR. SLONIM: And we will label that Exhibit -- Exhibit 8.

18:30:44 (Whereupon Exhibit 8 was marked for
18:30:44 identification)
18:30:49 THE WITNESS: Might I have a spare piece of
18:30:52 paper to first draw on and get to where I want to go?
18:30:52 BY MR. SLONIM:
18:30:59 Q. You mean a scrap paper?
18:31:00 A. Yeah.
18:31:01 Q. Absolutely.
18:31:02 A. Great.
18:34:05 Okay.
18:34:06 Q. Is this the only capacitor that -- the
18:34:10 only configuration of a capacitor that is required by
18:34:13 Claim 1?
18:34:17 A. Those are the only elements, if I can
18:34:23 call the various A's within Claim 1 as being elements
18:34:29 which are called out.
18:34:31 Q. Okay. And would you identify the
18:34:33 elements that you've drawn on Exhibit 8 as a
18:34:36 representation of a capacitor of Claim 1?
18:34:40 A. A representation of a -- as a schematic.
18:34:44 Okay.
18:34:44 Q. Yes.
18:35:42 And would you please explain what you
18:35:46 mean by Elements 1 and 2 in Exhibit 8?
18:35:50 A. By using the Arabic numbers 1 and 2, I

18:35:53 mean internally disposed conductive plates, 1 being a
18:36:02 conductive first plate, 2 being a conductive second
18:36:07 plate, of which 1 and 2 are sufficiently parallel to
18:36:13 form a capacitor between them.
18:36:17 Q. Does Claim 1 require a parallel plate
18:36:21 capacitor between plates 1 and 2?
18:36:23 A. No, it forms -- it requires forming a
18:36:26 capacitor, which means that the plates cannot touch or
18:36:33 they will short.
18:36:35 That's why I said sufficiently parallel.
18:36:38 The sufficient means that within the extent of
18:36:43 whatever size of body we have, they remain far enough
18:36:47 apart that they don't touch nor are they likely to
18:36:51 short.
18:36:54 Q. And would the parallel plate capacitance
18:36:58 be the only type of capacitance that could be formed
18:37:02 between plates 1 and 2 in Claim 1, as required by
18:37:07 Claim 1?
18:37:11 A. If these plates extend underneath the
18:37:17 wraparound area on the top or bottom of opposite
18:37:22 polarity, there would be also a small contribution to
18:37:26 capacitance there.
18:37:27 Q. And by small area on top and bottom, are
18:37:31 you referring to the contact -- second contact and a
18:37:37 parallel plate capacitance that would be formed

18:37:39 between, let's say, plate 1 and a top portion of a
18:37:46 second contact if plate 1 were extended further in the
18:37:51 direction of the second contact?
18:37:53 A. Right.
18:37:54 This area, I could cross hatch here the
18:37:57 amount of overlap.
18:37:59 Q. Would you use the red pen to show that
18:38:09 second parallel plate --
18:38:11 A. If I had plate 1 extend to this point,
18:38:14 then I would be interacting with this material on
18:38:19 the -- this also top of the material on the capacitor.
18:38:23 Q. Is this capacitance --
18:38:26 Let's label that capacitance by
18:38:28 extending the plate 1 and the overlap of -- give it a
18:38:32 number or a letter.
18:38:35 Maybe the best way to do it, could you
18:38:37 put a schematic capacitor kind of designation and
18:38:40 label that as capacitor in between them?
18:38:45 A. I could state that this and this
18:38:49 extended to form a capacitance.
18:38:53 Q. Okay. Could you label that
18:38:55 capacitance -- "Capacitance A"?
18:38:57 A. Okay.
18:38:58 Q. C --
18:39:02 A. C subA.

18:39:03 Q. C subA.
18:39:05 Okay. And is C subA capacitance
18:39:08 required by Claim 1?
18:39:11 A. I do not believe it is, on my reading of
18:39:16 Claim 1, out of context.
18:39:19 Q. I agree with you.
18:39:22 And but does Claim 1 require only
18:39:25 parallel plate capacitance to be formed between plates
18:39:29 1 and 2?
18:39:35 A. It requires a capacitance between 1 and
18:39:42 2, and it requires at least one fringe effect surface
18:39:46 capacitance.
18:39:47 Q. Correct.
18:39:48 Is there any other arrangement of plates
18:39:50 1 and 2 that you know of that would also satisfy --
18:39:56 that would not have a parallel plate capacitance
18:40:02 between them that would also satisfy Claim 1?
18:40:05 If you could draw it maybe on the
18:40:08 figure -- on a separate piece of paper.
18:40:10 A. You're asking me to --
18:40:13 Q. Give me another arrangement of plates if
18:40:16 Claim 1 would cover another arrangement of internal
18:40:20 plates 1 and 2 in your expert opinion.
18:40:25 A. I'd certainly need some time to work
18:40:29 that out. I cannot say that in a short period of,

18:40:34 say, an hour or less in this circumstance at the end
18:40:38 of the day that I could do sufficient justice.
18:40:43 Q. So is it the expert opinion that with
18:40:46 all your at least 24 years of service as one of
18:40:50 ordinary skill in the art, you cannot -- and being
18:40:54 offered as an expert in this field, you cannot,
18:40:59 sitting here today, give the Court a schematic of
18:41:04 another capacitor which would fall within claims of
18:41:08 Claim 1, within the scope of Claim 1, which would not
18:41:13 have a parallel plate capacitance between plate --
18:41:17 internal plates 1 and 2 inside the dielectric body?
18:41:21 Is that your testimony to the Court
18:41:23 today?
18:41:25 MR. SCHATZ: Objection.
18:41:25 THE WITNESS: I'll take some time --
18:41:27 MR. SCHATZ: Objection. Argumentative.
18:41:30 BY MR. SLONIM:
18:41:30 Q. You may answer.
18:41:31 A. Let me take some time for reflection.
18:42:23 Let me restate -- I believe I heard you
18:42:25 use the words "parallel plates", but I'm not sure.
18:42:31 So let me be firm and see whether you
18:42:33 had that as part of your restriction.
18:42:40 Q. Are you saying you don't remember the
18:42:41 question I asked?

A. As far as your specific words, whether they included a discussion of parallel plates or not, I'm unclear as to the precise wording of your question.

Q. The precise wording of my question now is --

And I would like you to take a sip before you start listening to me so there's no distraction and we don't have to waste time repeating questions.

A. Okay.

Q. Are you now ready?

A. I am now ready.

Q. Perfect.

Does Claim 1 of 356 patent require that the capacitance between internal plates 1 and 2, or as they're called in the Claim 1, first and second plates, be only parallel plate capacitor that would be formed between plates 1 and 2?

A. No, it does not.

Q. Based upon that, could you draw me another arrangement of internal plates 1 and 2 inside a dielectric body that would not have a parallel plate capacitance between them, but would still fall within the scope of Claim 1?

A. Again, let me play a minute.
This involves a certain amount of drawing skills.
Q. Do you possess them as one of ordinary skill in the art?
MR. SCHATZ: Are you asking whether the witness has drawing skills?
MR. SLONIM: I think the witness has referred to drawing skills, and he's being offered as one of ordinary skilled in the art.
And I would like to know whether the drawing skills are part of the base that the one of ordinary skill in the art possesses in the witness' expert opinion.
THE WITNESS: Not anymore.
There are CAD/CAM programs and programs which do everything for you. I think those skills are --
BY MR. SLONIM:
Q. Disappearing?
A. Yes.
Q. I tend to agree with you.
A. Okay. I submit a --
Q. May I take that piece of paper for a second just to place the exhibit number so we're sure

18:46:11 what we're talking about?
18:46:13 I placed the marker "Exhibit 9."
18:46:13 (Whereupon Exhibit 9 was marked for
18:46:13 identification)
18:46:13 BY MR. SLONIM:
18:46:15 Q. And would you please explain --
18:46:20 A. This is a hypothetical capacitor as
18:46:31 contrast to a usable or manufacturable capacitor,
18:46:39 which I see two internal plates not being parallel,
18:46:49 but not meeting within the confines of the
18:46:55 substantially monolithic body.
18:46:58 And, again, I've also significantly
18:47:01 varied the spacing between first and second contacts
18:47:05 as on the top and on the bottom of the body as both
18:47:11 being possible.
18:47:17 Q. And is it your opinion that the
18:47:20 capacitor that you've schematically drawn on Exhibit 9
18:47:24 would be within the Claim 1, within the scope of
18:47:32 Claim 1?
18:47:33 A. Yes.
18:47:33 Q. And does Claim 1 require the capacitor
18:47:35 to be usable?
18:47:39 Is there a word "usable" in Claim 1?
18:47:41 A. No.
18:47:41 Q. And does it require a capacitor of

18:47:44 Claim 1 to be manufacturable?
18:47:46 Is there a word "manufacturable" in
18:47:49 Claim 1?
18:47:49 A. No, there's not. It's just how one of
18:47:52 ordinary skill in the art would understand capacitor
18:47:56 designs to be.
18:47:58 Q. So you would like to insert the word
18:48:00 "usable" or "manufacturable" into Claim 1?
18:48:03 A. Only as --
18:48:04 MR. SCHATZ: Objection. Argumentative.
18:48:04 BY MR. SLONIM:
18:48:06 Q. You may answer.
18:48:07 Only as --
18:48:08 A. -- relates to one of ordinary skill in
18:48:11 the arts would understand it to be.
18:48:13 Q. But if the literal language of Claim 1
18:48:17 does not require a usable capacitor, what basis do you
18:48:23 have to insert that word into the claim?
18:48:29 A. Through discussions with capacitor
18:48:34 designers and manufacturers. They assume certain
18:48:41 things, like they want to design a capacitor that they
18:48:46 can manufacture and sell, sell for a profit.
18:48:49 Q. Does Claim 1 require the capacitor of
18:48:53 Claim 1 to make a profit?
18:48:55 A. No.

I'm just talking about how one of ordinary skill in the art would interpret it, if asked to design a capacitor meeting that.

(Whereupon Exhibit 10 was marked for identification)

BY MR. SLONIM:

Q. Okay. Let me place an Exhibit 10 in front of you, which is a schematic representation of another capacitor. And what I've labeled on it is internal plates 1 and 2.

The 1 and 2 labeled internal plates inside a dielectric body, and a first and a second are contacts that in Claim 1 are called first and second contact.

And I would like you to tell me whether a capacitor schematically represented by Exhibit 10, you would believe that would fall within the scope of Claim 1.

MR. SCHATZ: Take your time.

THE WITNESS: Sure.

THE WITNESS: As one of ordinary skill in the art where we talk about the internal plates forming a capacitor, I would understand that as being a determinable capacitor.

If I can't measure it in a practical

18:51:40 sense, it doesn't exist, it doesn't form a capacitor.
18:51:44 And so I would measure it.
18:51:47 If it forms a determinable or measurable
18:51:55 capacitance between 1 and 2, I believe it -- and
18:52:06 assuming that we have likewise a determinable fringe
18:52:12 effect capacitor on top and bottom, given those two, I
18:52:16 believe they would also fit.
18:52:19 MR. SCHATZ: Given that, I'd like to take a
18:52:21 break.
18:52:21 MR. SLONIM: Okay. Absolutely.
18:52:23 THE VIDEOGRAPHER: Going off the record.
18:52:24 The time is 18:51 hours.
19:01:08 (Whereupon a recess was taken)
19:01:10 THE VIDEOGRAPHER: Back on the record.
19:01:15 The time is 19:00 hours.
19:01:18 BY MR. SLONIM:
19:01:19 Q. Referring back to the capacitor
19:01:21 schematically represented in Exhibit 10, what is the
19:01:25 capacitance, what is the name of that capacitance
19:01:28 between internal plates 1 and 2?
19:01:33 A. I would consider that to be an internal
19:01:39 fringe effect capacitance that is formed.
19:01:41 Q. And is it any difference than the fringe
19:01:45 capacitance formed between contacts -- between ends of
19:01:47 the contacts first and second on the outside?

A. Being with -- Entirely disposed within the body, the dielectric on all sides is whatever the dielectric of the body is.

On the surfaces, you have -- below the surface or above the surface, your orientation -- you have one dielectric, the ceramic if we're talking a ceramic capacitor here, and the second I'm assuming is an air environment.

So you have two different dielectrics.

Q. I see.

So you're saying that in the air, there would not be a charge or a capacitance?

The air would not --

A. Oh, there would. It would just have a different dielectric constant.

Q. Okay. I appreciate that.

If I can just direct your attention to Exhibit 2, your declaration.

A. Okay. Please do.

Q. And I want to direct your attention to the bottom of what is labeled as "declaration of Expert Witness - 10".

A. Thank you. We've gone from 2 to 10 now.

Q. We're making progress.

A. Yes. Okay.

19:03:06 Q. And the sentence that I would like to read to you, and I would like you to follow my reading, begins -- it's on the second line from the bottom on Page 10 that starts with the word "Second" underlined.

19:03:21 A. Right.

19:03:22 Q. And that declaration says: "Second," underlined, comma, "I consider the six sides in standard monolithic dielectric capacitors to be major," in quotes," in that they contribute the very great majority of capacitance to the capacitor array and were designed to do so."

19:03:46 Did I read that sentence from your declaration accurately?

19:03:50 A. I believe so.

19:03:51 Q. Thank you.

19:03:52 Could you explain to me how you measure or what do you mean by majority of capacitance as used in that sentence?

19:04:13 A. Standard monolithic dielectric capacitors are designed to have parallel plates within them rather than grossly inparallel plates.

19:04:32 And we know from the formula you have submitted in Exhibit 7 that the capacitance is proportional to the area of the plates.

19:04:51 So where we have plates with large area,
19:04:58 we will have a large capacitance.
19:05:04 That if I have -- back to our brick --
19:05:08 if I have a chip or brick configuration which is
19:05:14 standard in monolithic capacitors, as opposed to feed
19:05:20 through capacitors, which are not monolithic --
19:05:25 Q. If I may interrupt you.
19:05:25 A. Yes.
19:05:27 Q. I just don't want to prolong this.
19:05:31 One question that arose from what you
19:05:33 said was what did you --
19:05:37 In that statement, did you purport to
19:05:40 address the requirements of Claim 1?
19:05:45 In the statement I read from your
19:05:47 declaration, did you purport to address the
19:05:49 requirements of capacitor of Claim 1, or some other
19:05:54 capacitor that requires parallel plate capacitance?
19:06:01 Because my concern with that is I think
19:06:03 we've established that Claim 1 does not require
19:06:06 parallel plate capacitance between internal plates.
19:06:10 So what I'm trying to understand, what
19:06:12 is the relevance of that statement in context of
19:06:16 Claim 1 which does not require parallel plate
19:06:21 capacitance?
19:06:22 A. The context is one of experience gained

19:06:28 of one who has ordinary skill of the arts in that I
19:06:38 know of no instances in some 23 or -4 years of
19:06:43 service, how many it is, where people have
19:06:48 manufactured and sold for a profit as opposed for
19:06:54 scientific experiments nonparallel plate capacitors.
19:07:01 So I believe one would be reading the
19:07:04 claims of the 356 patent in those terms.
19:07:12 That is how you would apply it. You
19:07:14 would have that set of explicit -- of implicit
19:07:21 understandings.
19:07:22 MR. SCHATZ: I'll just make a note for the
19:07:24 record that we are beyond the seven hours, and I'll
19:07:26 just allow Counsel another question or two and then
19:07:30 we'd like to conclude the deposition.
19:07:34 MR. SLONIM: Subject to the inspection of
19:07:36 documents, which due to Dr. Ewell's travel and other
19:07:43 circumstances beyond our control, was not arranged
19:07:46 prior to this deposition, I think we would agree with
19:07:51 you that the first day of that deposition would be at
19:07:57 an end with the one or two follow-up questions.
19:08:00 But upon -- we reserve the right that as
19:08:04 a testifying expert who has --
19:08:08 THE WITNESS: Proposed or purported expert, I
19:08:11 think was your adjective there.
19:08:11 / / /

19:08:11 BY MR. SLONIM:

19:08:15 Q. I agree with that.

19:08:16 A. Okay.

19:08:16 MR. SLONIM: As an expert submitted to the
19:08:18 Court as a testifying purported expert who has
19:08:23 reviewed and used in preparation a great number of
19:08:31 documents that were not produced to us nor listed
19:08:33 specifically by name in the declaration, we reserve
19:08:39 the right upon obtaining access to those documents,
19:08:43 including the notes of conversations with counsel and
19:08:47 drafts of the declaration and the e-mail traffic and
19:08:50 the Google search and the marked-up copies of the
19:08:54 patents and everything else that Dr. Ewell did in
19:09:00 preparation to resume this deposition, to examine him
19:09:04 based upon those documents.

19:09:07 Q. And with that said, my next question is:
19:09:12 If we were talking about a capacitor of
19:09:18 Exhibit 10, what would you define as the majority of
19:09:21 capacitance as you've used that term in the sentence I
19:09:28 read from your declaration?

19:09:33 A. If this capacitor -- and I'm assuming I
19:09:40 understand the design from a rough sketch --

19:09:46 Q. Do you have any question about that
19:09:48 rough sketch --

19:09:50 A. I would have to measure it to make sure

19:09:52 it has any determinable capacitance before I could
19:09:56 talk about the great majority of its capacitance.
19:10:01 Q. Would you be able to determine the
19:10:03 majority of that capacitance by a theoretical formula
19:10:08 or approximate that majority by a theoretical formula?
19:10:12 A. No, but by some very specific
19:10:19 measurements.
19:10:19 Q. And what would mean a great majority of
19:10:22 capacitance as compared to just simply majority of
19:10:27 capacitance?
19:10:31 A. I consider a majority of capacitance to
19:10:37 be 50.1 percent or more of the total.
19:10:42 Q. And what is the great majority of
19:10:46 capacitance?
19:10:46 A. I believe the great majority to be some
19:10:49 number -- some percentage considerably beyond that.
19:10:51 Q. And what is that percentage?
19:10:54 A. I've not thought through what it would
19:10:57 need to be, very --
19:11:02 Let's see. My terminology is "very
19:11:05 great majority" as to simply "great".
19:11:08 MR. SCHATZ: And with that, I would just ask
19:11:10 Counsel to -- if he's through with the deposition.
19:11:14 MR. SLONIM: Subject to our reservation of
19:11:16 rights to examine Dr. Ewell about the documents that

19:11:19 were not shown to us prior to the deposition, I would
19:11:22 agree with you.
19:11:24 Thank you, Dr. Ewell. I appreciate your
19:11:27 time.
19:11:27 THE WITNESS: Thank you all.
19:11:29 MR. SLONIM: Thank you, guys. Thank you very
19:11:31 much. It was a pleasure.
19:11:33 THE VIDEOGRAPHER: This concludes Volume I in
19:11:35 the deposition of Gary Ewell.
19:11:36 The number of tapes used was four. The
19:11:39 original video tapes will be retained by Merrill Legal
19:11:43 Solutions Los Angeles.
19:11:44 Going off the record.
19:11:44 The time is 19:11 hours.

(Whereupon the deposition was concluded
at 7:11 p.m.)

PENALTY OF PERJURY

I hereby declare I am the deponent in the within matter; that I have read the foregoing proceeding and know the contents thereof and I declare that the same is true of my knowledge except as to the matters which are therein stated upon my information or belief, and as to those matters I believe it to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the ______ day of __________________, 2008, at ____________________, California.

____
GARY JAMES EWELL

STATE OF CALIFORNIA)
)
) ss.
COUNTY OF LOS ANGELES)

I, SUSAN LYNN POBOR, Certified Shorthand Reporter No. 5132 for the State of California, do hereby certify:

That prior to being examined, the witness named in the foregoing deposition, was duly sworn to testify the truth, the whole truth, and nothing but the truth;

That said deposition was taken down by me in shorthand at the time and place therein named and thereafter reduced by me to typewritten form and that the same is a true, correct, and complete transcript of said proceedings.

Before completion of the deposition, review of the transcript [X] was [ ] was not requested. If requested, any changes made by the deponent (and provided to the reporter) during the period allowed are appended hereto.

I further certify that I am not interested in the outcome of the action.

Witness my hand this 4 day of August, 2008.

Susan Lynn Pobor

Susan Lynn Pobor, CSR No. 5132

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